

In the Claims:

Please cancel claim 3 without prejudice or disclaimer.

Please rewrite claims 1, 4-6, 10, 12-14, 16-18, 20, 25, 27 and 29 as follows:

1. (Amended) A display device comprising an actuator substrate having an actuator element, an optical waveguide plate, a crosspiece intervening between said optical waveguide plate and said actuator substrate and surrounding said actuator element, and a picture element assembly joined onto said actuator element, wherein:

said picture element assembly, in a state of no load, is disposed closely to or contacts said optical waveguide plate so as to cause light to be emitted from the optical waveguide plate.

4. (Amended) A display device comprising an actuator substrate having an actuator element, an optical waveguide plate, a crosspiece intervening between said optical waveguide plate and said actuator substrate and surrounding said actuator element, and a picture element assembly joined onto said actuator element, wherein:

said picture element assembly, in a state of no load, is in pressed contact with said optical waveguide plate so as to cause light to be emitted from the optical waveguide plate.

5. (Amended) The display device according to claim 4, wherein said picture element assembly is in said pressed contact with said optical waveguide plate by being urged toward said optical waveguide plate due to the elasticity of a thin-walled section of said actuator substrate when said actuator element is in said state of no load.

6. (Amended) A method for producing a display device, comprising:

a step of forming a crosspiece precursor for surrounding an actuator element on any one of an optical waveguide plate and an actuator substrate having said actuator element;

a step of forming a picture element assembly precursor on any one of said actuator element and said optical waveguide plate;

a step of joining said actuator substrate and said optical waveguide plate to one another by the aid of said picture element assembly precursor and any one of said crosspiece precursor and a crosspiece formed by hardening said crosspiece precursor;

a step of hardening said picture element assembly precursor on said actuator element to form a picture element assembly; and

a step of hardening said crosspiece precursor to form said crosspiece, wherein:

when said step of hardening said picture element assembly precursor is carried out, hardening is performed in a state in which said actuator element is displaced, and said picture element assembly precursor abuts against said optical waveguide plate.

10. (Amended) The method for producing said display device according to claim 6, further comprising:

performing a step of applying an adhesive to any one of said crosspiece precursor, said crosspiece, said actuator substrate, said optical waveguide plate, and a light-shielding layer formed on said optical waveguide plate, wherein:

said actuator substrate and said optical waveguide plate are joined to one another by the aid of any one of said crosspiece precursor and said crosspiece, and any one of said picture element assembly precursor and said picture element assembly by hardening said adhesive.

12. (Amended) A method for producing a display device, comprising:

a step of forming a picture element assembly precursor on an actuator element supported by an actuator substrate;

a step of forming a crosspiece precursor for surrounding said actuator element on any one of said actuator substrate and an optical waveguide plate;

a step of joining said substrate and said optical waveguide plate to one another by the aid of said crosspiece precursor and any one of said picture element assembly precursor and said picture element assembly formed by hardening said picture element assembly precursor;

a step of hardening said picture element assembly precursor to form said picture element assembly; and

a step of hardening said crosspiece precursor to form a crosspiece, wherein:

said picture element assembly is in pressed contact with said optical waveguide plate in accordance with shrinkage caused by hardening of said crosspiece precursor.

13. (Amended) The method for producing said display device according to claim 12, wherein when said step of hardening said picture element assembly precursor is carried out, hardening is performed in a state in which said actuator element is displaced, and said picture element assembly precursor abuts against said optical waveguide plate.

14. (Amended) The method for producing said display device according to claim 12, wherein when said step of hardening said crosspiece precursor is carried out, hardening is performed in a state in which said actuator element is displaced, and said picture element assembly abuts against said optical waveguide plate.

16. (Amended) A method for producing a display device, comprising:

a step of forming a crosspiece precursor for surrounding an actuator element on any one of an optical waveguide plate and an actuator substrate having said actuator element;

a step of forming a picture element assembly precursor on said optical waveguide plate;

a step of joining said actuator substrate and said optical waveguide plate to one another by the aid of said crosspiece precursor and said picture element assembly precursor, and arranging said picture element assembly on said actuator element;

a step of hardening said picture element assembly precursor on said actuator element to form a picture element assembly; and

a step of hardening said crosspiece precursor to form a crosspiece, wherein:

said picture element assembly is in pressed contact with said optical waveguide plate in accordance with shrinkage caused by hardening of said crosspiece precursor.

17. (Amended) The method for producing said display device according to claim 16, wherein when said step of hardening said picture element assembly precursor is carried out, hardening is performed in a state in which said actuator element is displaced, and said picture element assembly precursor abuts against said optical waveguide plate.

18. (Amended) The method for producing said display device according to claim 16, wherein when said step of hardening said crosspiece precursor is carried out, hardening is performed in a state in which said actuator element is displaced, and said picture element assembly abuts against said optical waveguide plate.

20. (Amended) The method for producing said display device according to claim 16, further comprising:

performing a step of applying an adhesive to any one of said crosspiece precursor, said crosspiece, said actuator substrate, said optical waveguide plate, and a light-shielding layer formed on said optical waveguide plate, wherein:

said actuator substrate and said optical waveguide plate are joined to one another by the aid of any one of said crosspiece precursor and said crosspiece, and any one of said picture element assembly precursor and said picture element assembly by hardening said adhesive.

25. (Amended) The method for producing said display device according to claim 22, further comprising:

performing a step of applying an adhesive to any one of said crosspiece precursor, said crosspiece, said actuator substrate, said optical waveguide plate, and a light-shielding layer formed on said optical waveguide plate, wherein:

said actuator substrate and said optical waveguide plate are joined to one another by the aid of any one of said crosspiece precursor and said crosspiece, and any one of said picture element assembly precursor and said picture element assembly by hardening said adhesive.

27. (Amended) A method for producing a display device, comprising:

a step of forming a first precursor of a first part of a picture element assembly on an actuator element supported by an actuator substrate, said first precursor being hardened to form said first part of said picture element assembly;

a step of forming a crosspiece precursor for surrounding said actuator element on said actuator substrate;

a step of defining an upper surface of said crosspiece precursor, and then hardening said crosspiece precursor to form a crosspiece;

a step of forming a second precursor of a second part of said picture element assembly on said first part of said picture element assembly on said actuator substrate;

a step of joining an optical waveguide plate and said actuator substrate to one another by the aid of said crosspiece and said first and second picture element assembly precursors; and

a step of hardening said second precursor of said second part of said picture element assembly on said actuator element to form said picture element assembly.

29. (Amended) The method for producing said display device according to claim 27, further comprising:

performing a step of applying an adhesive to any one of said crosspiece precursor, said crosspiece, said actuator substrate, said optical waveguide plate, and a light-shielding layer formed on said optical waveguide plate, wherein:

said actuator substrate and said optical waveguide plate are joined to one another by the aid of any one of said crosspiece precursor and said crosspiece, and any one of said picture element assembly precursor and said picture element assembly by hardening said adhesive.

Please add new claims 31 and 32 as follows:

31. (New) A display device comprising an actuator substrate having an actuator element, an optical waveguide plate, a crosspiece intervening between said optical waveguide plate and said actuator substrate and surrounding said actuator element, and a picture element assembly joined onto said actuator element, wherein:

said picture element assembly and said optical waveguide plate are brought into pressed contact with one another when a voltage is applied having a polarity opposite to that of a voltage to be applied to said actuator element to separate said picture element assembly from said optical waveguide plate.

32. (New) The display device according to claim 31, wherein a distance between said picture element assembly and said optical waveguide plate in a state of no load is not more than 30 % of a distance of separation between said picture element assembly and said optical waveguide plate in a driving state.